

REMARKS

Claims 1, 8 and 9 have been amended. No new matter has been added.

Claims 1-13 are pending in the present application.

Reconsideration and allowance are respectfully requested in view of the following remarks.

Statement of Interview Summary

Applicant thanks Examiners John Hotaling and Ryan Hsu of the U.S. Patent and Trademark Office for their time and consideration in participating in the interview with Applicant's representatives on May 19, 2008.

During the interview, Applicant's representatives described the invention with reference to the figures. The present invention relates to controlling of a cursor. FIG. 2 is an example of a screen display of a game which controls a cursor according to an exemplary embodiment of the invention. In FIG. 2, the example of the screen display of the game includes an image of a sideboard 201, an image of a vase 202, an image of a lighting fixture 203, an image of a door 204, an image of a doorknob 205 fixed to the door 204, an image of a ball 206, and an image of a person 207.

A plurality of points are set in the screen. FIG. 3 shows an exemplary embodiment of the plurality of points set in a screen. In FIG. 3, regions 301 to 305 indicated by dotted circles show points, respectively. The region 301 shows a point set for the vase 202; the region 302, the lighting fixture 203; the region 303, the doorknob 205; the region 304, the ball 206; and the region 305, the person 207. In FIG. 3, the points are visible to for explanation purpose. However, the points may be

invisible in an actual game so the player can discover a point in the game. In FIG. 3, reference numeral 310 denotes a path which circulates through the coordinate positions of the points (301 to 305). In this embodiment, the path 310 is not visible to the user, similarly to the points described above.

FIGS. 7A and 7B provides examples of directions in which the joystick 107 can be tilted, and the corresponding moving directions of the cursor. In FIGS. 7A and 7B, when a joystick 107 is tilted in the direction indicated by 701, the coordinate position of the intersection point of the path 310 and a line segment 751 extending from a predetermined point, e.g., the barycentric position 710 of all the points 301 to 305, is calculated. The line segment 751 extends from the point 710 in a direction corresponding to the direction in which the joystick 107 is tilted. The display position of the cursor is then moved to the coordinate position of this calculated intersection point.

During the interview, Applicant's representatives also described the cited reference, Rimoto (U.S. Patent No. 6,257,983, hereinafter "Rimoto"), which relates to locating the target position of a cursor controlled by a joystick. In Rimoto, the displacement distance of a cursor in the x-axial or y-axial directions is determined by the tilt data of the joy stick. This is illustrated in FIGS. 4A-4C. Referring to FIGS. 4A-4C, the displacements of the target position of movement in accordance with the tilt data "0", "1/6", "2/6", "3/6", "4/6", "5/6", and "1" are, respectively, $F_h(0)$, $F_h(1/6)$, $F_h(2/6)$, $F_h(3/6)$, $F_h(4/6)$, $F_h(5/6)$, and $F_h(1)$, where $F_h(x) = |X_1 - X_0| \cdot \sin(|x \cdot \pi/2|)$.

Therefore, Rimoto does not teach or suggest the features of the exemplary embodiments of the invention, e.g., first calculating a path 310 that passes through certain points, and then calculating the coordinate position of the intersection point of

the path 310 and a line segment 751 extending from a predetermined point, e.g., the barycentric position 710 of all the points 301 to 305, in a direction corresponding to the direction in which the stick 107 is tilted, and moving the cursor to the coordinate position of the intersection point.

The Examiners agreed that the currently cited reference does not teach or suggest the features of the exemplary embodiments of the invention. However, the Examiners suggested considering amending the claims to clarify the claimed subject matter, e.g., describing the path more particularly.

Claim Rejections Under 35 U.S.C. § 112

Claim 9 is rejected under 35 U.S.C. § 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner contends that it is not clear how a path is determined, and there is no initial point for moving the cursor. Furthermore, the Examiner contends that it is not clear how the cursor is controlled by the method, and that the terms "vicinities" and "segment extending from a predetermined coordinate position" seem to have no foundation or frame of reference.

As discussed during the interview, the path that is recited in the claims is not one that is calculated in response to movement of the joystick. Rather, it is calculated ahead of time, as a path that passes through the points that are associated with the displayed objects. When the joystick is subsequently moved, the position of the cursor is determined by the point at which that pre-calculated path is

intersected by a line segment whose orientation is determined by the direction of movement of the joystick.

After the discussion during the interview, the Examiners agreed that they have obtained an understanding of the claims, for example, how a path is determined and how the cursor is controlled by the method. The Examiners also agreed that the meaning of the term "segment extending from a predetermined coordinate position" is clear.

Claim 9 has been amended to clarify the meaning of the term "vicinities." In view of the foregoing, withdrawal of the rejection of claim 9 under 35 U.S.C. § 112, second paragraph, is respectfully requested.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-13 are rejected under 35 U.S.C. §102(b) as being allegedly anticipated by Rimoto.

Claim 1 is amended to recite path calculation means for calculating a path which circulates through vicinities of positions of the points on the basis of coordinate positions of the points in the display screen, each of the points being associated with a respective object in an image displayed in the display screen.

The amendment to claim 1 is to clarify the term "path," as discussed during the May 19, 2008 Examiner interview.

According to exemplary embodiment of claim 1, a calculated coordinate position of the cursor is the intersection point of the above-mentioned path and a line segment extending from a predetermined coordinate position in a region surrounded by the path, which extends in the direction indicated by a designation, such as movement of the joystick. In other words, the displacement of the joystick

designates an intersection point on the path, as defined by a line extending from a predetermined coordinate position in a region surrounded by the path. The joystick movement determines the orientation of this line. The actual displacement of the cursor may be in a different direction, depending upon its previous position.

In contrast, in Rimoto, the direction of displacement of the cursor 62 depends on tilt data (x), and the distance of the displacement depends on the function $F_h(x)$. $F_h(x)$, for example, may be a sine value of the tilt data (x). Rimoto does not teach or suggest a path used to determine the display position of the cursor, as described in claim 1.

In view of the foregoing, claim 1 is patentable. Claims 8 and 9 are patentable for reasons analogous to those for claim 1. The remaining claims are patentable at least because of their respective dependencies.

CONCLUSION

From the foregoing, further and favorable action in the form of a Notice of Allowance is respectfully requested and such action is earnestly solicited.

In the event that there are any questions concerning this amendment, or the application in general, the Examiner is respectfully requested to telephone the undersigned so that prosecution of present application may be expedited.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: June 19, 2008

By: /James LaBarre/
James A. LaBarre
Registration No. 28632

P.O. Box 1404
Alexandria, VA 22313-1404
703 836 6620